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| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/648,506 | MITAL ET AL. | |
| | Examiner | Art Unit | |
| | LIN LIU | 2445 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/14/2009.
2. ☒ The allowed claim(s) is/are 1-3,5-13 and 15-23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>20091215</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

/Rupal D. Dharial/
 Supervisory Patent Examiner, Art Unit 2400

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Joseph F. Oriti (47,835) on December 10 and December 15, 2009.

2. The application has been amended as follows:

Claim 1 (Currently Amended) A method comprising:

classifying actions associated with first and second service entities, the first service entity being associated with a first application service and the second service entity being associated with a second application service different from the first application service, the first service entity of the first application service having first metadata attributes associated therewith and the second service entity of the second application service having second metadata attributes associated therewith, the first metadata attributes describing a format of data of the first service entity and actions available to be performed on the first service entity, and the second metadata attributes describing a format of data of the second service entity and actions available to be performed on the second service entity, the first metadata attributes of the first service entity being different from the second metadata attributes of the second service entity, wherein each action is classified according to its availability, wherein classifying an action comprises classifying an action as available according to a rule comprising at

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least one of a maximum number of times which an action can be performed, a time period in which an action must be performed, a user or class of users which must perform an action, a condition which must occur before performance of an action, or a condition which must occur after performance of an action;

running a context service that matches the first and second service entities despite the different first and second metadata attributes thereof, the context service matching the first and second entities by cross-referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, the context service upon matching the first and second service entities consolidating the matching first and second service entities into a single consolidated context entity and consolidating the first and second metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity;

determining with reference to the consolidated set of metadata attributes that an action is available to be performed based on a corresponding classification of the availability of the action for each of the matched first and second service entities; and

displaying the action available to be performed.

Claim 2 (Original) The method of claim 1, wherein classifying the actions comprises classifying the actions as optimistically available.

Claim 3 (Original) The method of claim 2, wherein classifying the actions as optimistically available comprises classifying the actions as available subject to a rule.

Claim 4. (Canceled)

Claim 5 (Original) The method of claim 1, wherein classifying the actions as available according to a rule comprises classifying the actions as being available only if the rule is complied with.

Claim 6 (Original) The method of claim 1, wherein the classifying the actions comprises classifying the actions as universally available.

Claim 7 (Previously Presented) The method of claim 1, wherein determining if an action is available comprises determining if performance of the action will result in a conflict.

Claim 8 (Previously Presented) The method of claim 1, further comprising consolidating the first and second service entities into a context entity and matching an application entity to the context entity.

Claim 9 (Previously Presented) The method of claim 8, further comprising providing a view at an application of the actions available to be performed on each of the first and second service entities at the application services.

Claim 10 (Currently Amended) A method for providing to an application an action available to be performed on a first service entity at a first application service, the method comprising:

running a context service that matches a second service entity to an associated context entity derived from the first service entity, the first service entity being associated with a first application service and the second service entity being associated with a second application service different from the first application service,

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the first service entity of the first application service having first metadata attributes associated therewith and the second service entity of the second application service having second metadata attributes associated therewith, the first metadata attributes describing a format of data of the first service entity and actions available to be performed on the first service entity, wherein determining if the action is available to be performed on the first service entity is based on a classification that the action is available according to a rule comprising at least one of a maximum number of times which an action can be performed, a time period in which an action must be performed, a user or class of users which must perform an action, a condition which must occur before performance of an action, or a condition which must occur after performance of an action, and the second metadata attributes describing a format of data of the second service entity and actions available to be performed on the second service entity, the first metadata attributes of the first service entity being different from the second metadata attributes of the second service entity, the matching of the first and second service entities being performed despite the different first and second metadata attributes thereof, the first service entity being extensible markup language data associated with the first application service and the second service entity being extensible markup language data associated with the second application service, wherein the first application service is connected via a network to the second application service, the context service matching the first and second entities by cross-referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, the context service upon matching the first and second service entities

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consolidating the matching first and second service entities into a single consolidated context entity and consolidating the first and second metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity;

identifying that the associated context entity is derived from the first service entity;

in response to a selection of the first service entity, determining with reference to the consolidated set of metadata attributes that an action is available to be performed on the matched first service entity at the first application service based on a classification of the action according to its availability; and

displaying the action available to be performed.

Claim 11 The method of claim 10, comprising identifying that the associated context entity is derived from the first service entity and a second service entity at a second application service, the first service entity being related to the second service entity.

Claim 12 (Original) The method of claim 10, comprising determining if the action is available to be performed on the first service entity at the first application service based on a classification that the action is optimistically available.

Claim 13 (Original) The method of claim 12, comprising determining if the action is available to be performed on the first service entity at the first application service based on a classification that the action is available subject to a rule.

Claim 14. (Canceled)

Claim 15 (Currently Amended) The method of claim 44 10, comprising determining if the action is available to be performed on the first service entity at the first application service based on a classification that the action is available only if the rule is complied with.

Claim 16 (Original) The method of claim 10, comprising determining if the action is available to be performed on the first service entity at the first application service on a classification that the action is universally available.

Claim 17 (Original) The method of claim 10, wherein determining if the action is available to be performed on the first service entity comprises determining if performance of the action on the first service entity will result in a conflict .

Claim 18 (Original) The method of claim 10, further comprising generating a view of the action at the application.

Claim 19 (Currently Amended) A system for determining if a first action and a second action are available to be performed in connection with a computer-implemented context entity, the computer-implemented context entity derived from a first service entity at a first application service, wherein determining if the action is available to be performed on the first service entity is based on a classification that the action is available according to a rule comprising at least one of a maximum number of times which an action can be performed, a time period in which an action must be performed, a user or class of users which must perform an action, a condition which must occur before performance of an action, or a condition which must occur after

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performance of an action and a second service entity at a second application service, the first service entity being related to the second service entity, the first service entity of the first application service having first metadata attributes associated therewith and the second service entity of the second application service having second metadata attributes associated therewith, the first metadata attributes describing a format of data of the first service entity and actions available to be performed on the first service entity, and the second metadata attributes describing a format of data of the second service entity and actions available to be performed on the first service entity, the first metadata attributes of the first service entity being different from the second metadata attributes of the second service entity, the system comprising:

the first application service, said first application service classifying the first action and providing the classification of the first action to an action service, the first action classified according to its availability to be performed on the first service entity at the first application service;

the second application service, said second application service classifying the second action and providing the classification of the second action to an action service, the second action classified according to its availability to be performed on the second service entity at the second application service;

the action service, said action service determining if the first action and the second action are available based on the classification of the first action the classification of the second action; and

the context service, said context service matching the first and the second service entities despite the different first and second metadata attributes thereof, consolidating the first and the second service entities into the computer-implemented context entity, and querying the action service to determine that the first action is available and the second action is available for each of the matched first and second service entities, the context service matching the first and second entities by cross-referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, the context service upon matching the first and second service entities consolidating the matching first and second service entities into the computer-implemented context entity as a single consolidated context entity and consolidating the first and second metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity,

the action service determining if the first action and the second action are available with reference to the consolidated set of metadata attributes.

Claim 20 (Original) The system of claim 19, wherein said action service comprises a conflict protection mechanism to determine if performance of the first and the second action will result in a conflict.

Claim 21 (Original) The system of claim 19, wherein said action service comprises a tracking mechanism to track performance of the first and the second actions.

Claim 22 (Original) The system of claim 19, further comprising an application, said application managing an application entity that is matched to the context entity.

Claim 23 (Original) The system of claim 22, wherein said application comprises a state and relationship view mechanism for displaying a view of the first and the second actions.

Allowable Subject Matter

3. Claims 1-3, 5-13 and 15-23 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The claimed invention is directed toward a method comprising: classifying actions associated with first and second service entities, the first service entity being associated with a first application service and the second service entity being associated with a second application service different from the first application service, the first service entity of the first application service having first metadata attributes associated therewith and the second service entity of the second application service having second metadata attributes associated therewith, the first metadata attributes describing a format of data of the first service entity and actions available to be performed on the first service entity, and the second metadata attributes describing a format of data of the second service entity and actions available to be performed on the second service entity, the first metadata attributes of the first service entity being different from the second metadata attributes of the second service entity, wherein each action is classified according to its availability, wherein classifying an action comprises classifying an action as available according to a rule comprising at least one of a

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maximum number of times which an action can be performed, a time period in which an action must be performed, a user or class of users which must perform an action, a condition which must occur before performance of an action, or a condition which must occur after performance of an action; running a context service that matches the first and second service entities despite the different first and second metadata attributes thereof, the context service matching the first and second entities by cross-referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, the context service upon matching the first and second service entities consolidating the matching first and second service entities into a single consolidated context entity and consolidating the first and second metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity; determining with reference to the consolidated set of metadata attributes that an action is available to be performed based on a corresponding classification of the availability of the action for each of the matched first and second service entities; and displaying the action available to be performed.

4. In specific, the prior art of record taking singly or in combination does not teach or suggest “wherein classifying an action comprises classifying an action as available according to a rule comprising at least one of a maximum number of times which an action can be performed, a time period in which an action must be performed, a user or class of users which must perform an action, a condition which must occur before performance of an action, or a condition which must occur after performance of an

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action; running a context service that matches the first and second service entities despite the different first and second metadata attributes thereof, the context service matching the first and second entities by cross-referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, the context service upon matching the first and second service entities consolidating the matching first and second service entities into a single consolidated context entity and consolidating the first and second metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity;" in combination with rest of the claim elements.

5. In addition, Applicant's argument presented in pages 11-12 of the remark dated 09/14/2009 with respect to the rejection of claims 1 10 and 19 has been fully considered and deemed persuasive. Wherein the remark, the Applicant argues that "Applicants again note that the Tracey reference teaches a database system with bin records, each of which is the same exact table format, and thus based on the same metadata attributes. Applicants respectfully submit that the Tracey data in the bins table 200 of Fig. 3 is not exemplary of different metadata attributes in the manner recited in independent claims 1, 10, and 19, especially inasmuch as all of the data in such bins table 200 is formatted according to a common data format / set of metadata attributes. That is, each record (i.e., a row in the table 200) includes an entry for a common set of attributes / data types as represented by the columns of the table 200." And "In particular, Applicants respectfully submit that the cited references in general and the

Tracey reference in particular do not disclose or even suggest the use of a context service that matches the first and second entities by cross- referencing the first and second metadata attributes thereof to identify actual and/or potential relationships, that consolidates the matched first and second service entities into a single consolidated context entity, and that consolidates the first and second metadata attributes into a single consolidated set of metadata attributes describing a format of data of the single consolidated context entity and actions available to be performed on the single consolidated context entity, as is now recited in independent claims 1, 10, and 19.”

6. Therefore, the closest prior art of record (i.e: Tracey et al. (PGPUB: US 2003/0083917 A1), Evans et al. (PGPUB: US 2004/0019560 A1) and Brendle et al. (PGPUB: US 2005/0021355 A1)) taking singly or in combination does not teach or suggest these features. Based on this reasoning, claim 1 is allowable over the prior art of record.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIN LIU whose telephone number is (571)270-1447. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Srivastava Vivek can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lin Liu/
Examiner, Art Unit 2445

/Rupal D. Dharia/
Supervisory Patent Examiner, Art
Unit 2400